

REMARKS

The Office Action dated June 14, 2004 has been carefully considered. Claims 8, 10, 14-17 and 19 have been amended. Claims 13 and 20-24 have been cancelled. Claims 8-12 and 14-19 are in this application.

The Examiner indicated claims 14 and 16 are allowable if rewritten in independent form to overcome the rejections under 35 U.S.C. § 112. Claims 14 and 16 have been rewritten in independent form and meeting the guidelines of 35 U.S.C. § 112.

Claims 20-24 directed to a nonelected invention have been cancelled. Applicants retain the right to file a divisional application directed to the cancelled claims.

Claims 8-19 were rejected as indefinite. The limitations of claim 13 have been added to claim 8 and a structural relationship has been provided between the means for pinching and means for inserting. In claim 16, antecedent basis has been provided for said one or more protrusions. No new matter has been entered.

The previously presented claims 8 and 9 were rejected under 35 U.S.C. § 102 as anticipated by U.S. Patent No. 6,539,850 to Parker. The limitations of claim 13 have been added to claim 8. In particular, Parker does not teach or suggest means for pinching the individual tire at one or more locations and means for inserting a coupling element at the pinched locations of the individual tire. Accordingly, Parker does not teach or suggest all the limitations of the present claims. Thus, the invention defined by the present claims is not anticipated by Parker.

The previously presented claims 8-11 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,347,919 to Nordberg and claims 13 and 15 were rejected as obvious in view of Nordberg in combination with U.S. Patent No. 5,718,166 to Phillips.

Applicants submit that the limitations of claim 13 have been added to claim 8. Accordingly, Nordberg does not teach or suggest each and every limitation of the present claims 8-11 and the invention defined by the present claim is not anticipated by Nordberg.

Nordberg discloses a machine for compacting a row of tires in a side-by-side relationship. A first compactor plate compacts a first tire of the row. A second compactor plate compacts the last tire of the row. The compactor plates include a plurality of slots for receiving binding wires so that the wires can be wrapped around the compacted row of tires.

In contrast to the invention defined by the present claims, Nordberg does not teach or suggest means for compacting an individual tire into a compacted form. Rather, Nordberg teaches compacting a plurality of tires placed side-by-side in a row. Further, Nordberg does not teach or suggest means for pinching the individual tire at one or more locations and means for inserting a coupling element at the pinched locations of the individual tire. To the contrary, Nordberg teaches wrapping guide wires around the compacted set of tires. However, there is no teaching or suggesting of maintaining an individual tire in a compacted form by inserting a coupling element at a pinched location. Applicants submit that the Nordberg machine using guide wires for wrapping a plurality of tires has the disadvantage that the tires will expand back and will not be held sufficiently in a compacted shape. Accordingly, the Nordberg machine will not provide reduction of an individual tire cubic volume of at least 50%. Accordingly, the invention defined by the present claims is not obvious in view of Nordberg.

Phillips discloses an apparatus and method for making pipes made of a plurality of discarded vehicle tires. A batch of the tires are compacted with a telescopic mandrel having first and second compactor plates. Grabbing jaws mounted on the telescopic mandrel while the mandrel is extended are used for loading a second batch of tires. A plunger cylinder has a spear point for puncturing a hole through the sidewall of all tires in a compressed bundle of the discarded tires. A tie rod is inserted in the holes for retaining the pipe in a compressed mode.

In contrast to the invention defined by the present claims, Phillips does not disclose or suggest a system for compacting an individual tire. Rather, Phillips discloses manufacturing a pipe from a plurality of discarded tires in which the adjacent tires are performing the compression.

Furthermore, Phillips does not teach or suggest means for pinching the individual tire at one or more locations and means for inserting a coupling element at the pinched locations of the individual tire. Instead, Phillips teaches that a hole is punctured in each tire of the bundle of tires and a tie rod is inserted laterally through the plurality of tires. However, Phillips does not disclose or suggest inserting a coupling element at one or more indentations of an individual tire for maintaining the individual tire in compacted form. Applicants submit that the present invention does not require a first step of puncturing a hole in each of the tires as described in

Phillips. Rather, the system of the present invention pinches the individual tire at one or more locations and inserts the coupling element at the indentation.

In addition, Phillips does not disclose or suggest that the coupling element is a nail, staple, wire or thread, as defined in claim 15. Applicant submits that the defined coupling elements are advantageous for individual tires. In contrast, Phillips teaches away from the present invention by teaching a tie rod, which is advantageous for coupling a plurality of tires, but is not advantageous for coupling an individual tire. Thus, Phillips does not cure the deficiencies of Nordberg noted above. Accordingly, the invention defined by the present claims is not obvious in view of Nordberg alone or in combination with Phillips.

Claim 12 was rejected under 35 U.S.C. § 103 as obvious in view of Nordberg in combination with U.S. Patent No. 4,729,301 to Smith et al.

Smith et al. disclose a horizontal baling apparatus for baling compressible material of unknown density. A density determining means includes means for sensing the pressure exerted by the compression ram on the scrap material.

In contrast to the invention defined by the present claims, Smith et al. do not teach or suggest a system for maintaining an individual tire in a compacted form. Rather, Smith et al. is directed to baling compressible material of unknown density. Further, Smith et al. do not teach or suggest means for pinching the individual tire at one or more locations and means for inserting a coupling element at the pinched locations of the individual tire. In addition, Smith et al. do not teach or suggest a proximity sensor for sensing the distance between a first crushing plate and a second crushing plate and activating the means for maintaining the individual tire in compacted form. Instead, Smith et al. is directed to sensing the length of a stroke for determining density of a material. Accordingly, the Smith et al. sensor has a very different application than the sensor defined by the present claims. Further, Applicants submit that there would be no motivation to one of ordinary skill in the art to combine the Smith et al. sensor for a baler having a different operation with the Nordberg machine of tire compacting apparatus and it is only in hindsight that the Examiner can suggest that these references can be combined. Accordingly, the invention defined by the present claims is not obvious in view of Nordberg in combination with Smith et al.

Original claims 17-19 were rejected under 35 U.S.C. § 103 as obvious in view of Nordberg and further in view of U.S. Patent No. 5,244,611 to Cristofano et al.

Cristofano et al. disclose a method for angular positioning of a green tire in a curing unit. A reader reads an identification marker indicating its origin, in the machine on which the tire was produced. A second step extracts data relative to the asymmetry of the curing unit and an average tire produced. In a third step, the tire is positioned in the curing unit to compensate for the determined asymmetries.

In contrast to the invention defined by amended claim 17, Cristofano et al. do not disclose or suggest that means for marking are used for marking the individual tire with an identification of a scrap tire generator before a means for compacting. Rather, Cristofano et al. teach reading markings indicating origin of the tire. Further, the markings are provided during manufacturing of the original tire before use of the tire. However, there is no teaching or suggestion of providing a marking of a scrap tire generator after use of the tire before compacting in a system for maintaining the individual tire in a compacted form. As described on page 7, lines 17-20 of the present application, by utilizing the shipping manifest that bears an identifier that is assigned to each tire generator, scrap tires marked with the identifier can be tracked on their way to the final destination. There is no teaching or suggestion of these advantages in Cristofano et al.

Further, Cristofano et al. do not relate to a method of recycling an individual tire and does not cure the deficiencies of Nordberg noted above. Accordingly, the invention defined by the present claims is not obvious in view of Nordberg in combination with Cristofano et al.

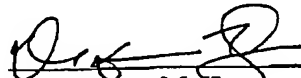
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In view of the foregoing, Applicants submit that all pending claims are in condition for allowance and request that all claims be allowed. The Examiner is invited to contact the undersigned should he believe that this would expedite prosecution of this application. It is believed that no fee is required. The Commissioner is authorized to charge any deficiency or credit any overpayment to Deposit Account No. 13-2165.

Respectfully submitted,

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